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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Kohane *et al.* Examiner: Di Nola Baron, L.
Serial No.: 09/981,020 Group Art Unit: 1615
Filed: October 16, 2001
For: LIPID-PROTEIN-SUGAR PARTICLES FOR DRUG DELIVERY

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Declaration under 37 C.F.R. § 1.131

I, Daniel S. Kohane, declare as follows:

1. I am currently an Assistant Professor at Harvard Medical School, a staff physician at the Massachusetts General Hospital, and a Research Affiliate in Professor Robert Langer's laboratory at MIT. My research focuses on drug delivery, especially as applied to pain, epilepsy, vaccine development and peritoneal adhesions. A copy of my curriculum vitae is attached as **Exhibit A**.
2. I am a co-inventor of the subject matter disclosed and claimed in United States Patent Application Serial Number 09/981,020, filed October 16, 2001, and entitled "Lipid-Protein-Sugar Particles for Drug Delivery" (the '020 application).
3. This declaration is presented for the purpose of removing from consideration by the Examiner the reference by Bot *et al.* (WO 00/00215, published January 6, 2000).
4. On a date before January 6, 2000, the publication date of the Bot *et al.* reference, Professor Robert S. Langer, Michael Lipp, and I conceived of a drug delivery system using particles made up of lipid, protein, and sugar components.

5. **Exhibit B** is two pages from my laboratory notebook. The first page (page 1) shows the preparation of particles including nifedipine encapsulated in a matrix of lactose, DPPC, albumin, and nifedipine, and other particles including bupivacaine encapsulated in same matrix. The second page shows the characterization of the particles containing bupivacaine. These laboratory notebook pages bear dates prior to January 6, 2000; however, these dates have been redacted.

6. **Exhibit C** is a draft of a manuscript entitled "Sciatic nerve blockade with lipid-protein-sugar particles containing bupivacaine" by myself and others. The work described in this manuscript was included as Example 1 (page 26) of the '020 application. The manuscript on the cover page bears a preparation date prior to January 6, 2000; however, this date has been redacted.

7. I declare that all statements made herein of my own knowledge are true, and that those statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful, false statements and the like are made punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful, false statements may jeopardize the validity of the '020 application or any patents that may issue thereon.

Daniel S. Kohane
Daniel S. Kohane, M.D., Ph.D.

7/2/04
Date